Remarks

Claims 49 and 50 are pending in this application, and are subject to final rejection(s). By this amendment, claim 49 has been amended to remove reference to vectors and host cells. Claim 49 has also been amended to specify that the SIV nucleic acid sequences are "*Gag-Pol nucleic acid sequences*" which are "*capable of producing an SIV capsid*". Basis for this amendment is found on page 2, line 16 and page 12, line 7 of the specification. No new matter is introduced by this amendment.

After entry of this Amendment, **claims 49 and 50 are pending in this application**. Consideration and allowance of the pending claims is requested.

Objections

In the subject Action, the Office appears to have maintained objections made in the March 17, 2010 Office action to the wording of claim 49. Applicants note that claim 49 was amended on June 17, 2010 to address those previous objections, and to integrate the specific language that was suggested by the Examiner in the March 17 Office action. Applicants note that the Examiner has provided new proposed language for claim 49 in the subject Office action. This new proposed claim 49 includes changes that were suggested (and made) previously, the reversal of some of those previous changes, and additional new language ("wherein the nucleic acid is" and "wherein the SIV nucleic acid sequences are").

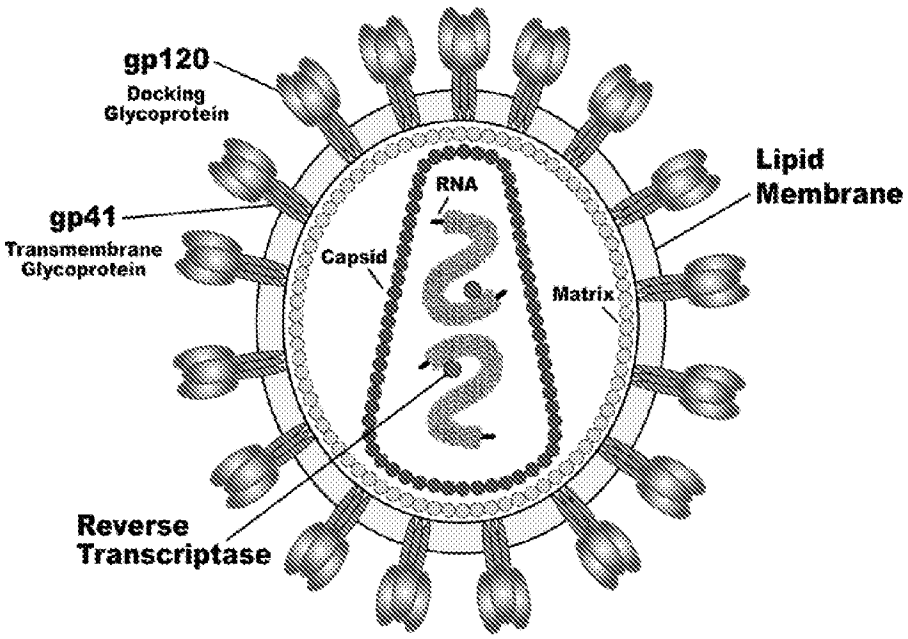
Insofar as the Office suggests that reference to administration of vector systems or host cells is objectionable, these terms have been removed from claim 49 in the current filing. The Examiner's other suggestions have also been incorporated, with adaptations as necessary in view of the following discussion. Applicants request that the objection to claim 49 be withdrawn.

If any further objections might be raised about the language of the claims, Applicants request that the Examiner telephone their undersigned representative prior to issuing a new Office action in order to expedite allowance of this application.

Rejection based on 35 USC §102(b)

In the subject Office Action, the previous rejection of claims 49 and 50 under 35 USC §102(b) as being anticipated by Allen *et al.* was maintained. In particular, the Office alleges that the term "*one or more Simian Immunodeficiency Virus (SIV) nucleic acid sequences encoding an SIV capsid"* encompasses the SIV env sequence. For example, the Examiner states, "*And while other proteins can be part of the capsid, envelope protein which is responsible for pseudotyping establishes the nature of the capsid."* However, this statement is not correct and is based on the erroneous assumption that the lentiviral **envelope** is a part of the lentiviral **capsid** and that the presence of an SIV envelope protein in the envelope of a retroviral particle is sufficient to make the capsid of the viral particle an "SIV capsid".

In fact, the term "capsid" in the field of virology refers specifically to the icosahedral shell which surrounds the nucleic acid. It does not refer to the fully formed virus particle. A lipid membrane surrounds the capsid and this is called the envelope. The envelope may contain membrane proteins, such as env. The capsid and the envelope are therefore different parts of the retroviral particle and the env protein is not part of the lentiviral capsid. A schematic illustration of a lentiviral virion (specifically, a HIV virion) is provided below:



(Source: Wikipedia; Original source: US National Institute of Health)

Since they are different and separate structures, altering the envelope of a lentivirus does not affect the structure of the capsid, which will remain the same within the altered envelope. In accordance with the standard technical meanings of these terms, one of ordinary skill in this art would understand that an HIV-2 capsid which is coated with an envelope comprising SIV env is still an "HIV-2 capsid" and not an "SIV capsid" as alleged in the Office action.

Although it discloses the presence of SIV env in the viral envelope, Allen *et al.* is completely silent about retroviruses which comprise heterologous nucleic acid linked to HIV-2 packaging signals contained within an SIV viral capsid, as set out in Applicants' instant claims.

Notwithstanding the above, claim 49 has been amended to specify that the SIV nucleic acid sequences are Gag-Pol nucleic acid sequences.

Allen *et al.* lacks any disclosure of SIV Gag-Pol sequences. The pseudotyped HIV-2 viruses of Allen comprise capsids that are produced by HIV-2 Gag-Pol sequences. These capsids are coated in a lipid envelope which comprises SIV env. Allen *et al.* is completely silent about capsids which are produced by expression of SIV Gag-Pol sequences.

There is no disclosure or suggestion in Allen *et al.* of chimaeric viral vectors that comprise heterologous nucleic acid linked to HIV-2 packaging signals contained within an SIV viral capsid produced by SIV Gag-Pol sequences as set out in the instant claims. Thus, claims 49 and 50 are not and cannot be anticipated by Allen *et al.*, and Applicants respectfully request reconsideration and withdrawal of the rejection.

Conclusion

Based on the foregoing amendments and arguments, the pending claims are in condition for allowance, and notification to that effect is requested. If for any reason the Examiner believes that a telephone conference would expedite allowance of the claims, please telephone the undersigned at the telephone number listed below.

Respectfully submitted,

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